#### (19) World Intellectual Property Organization International Bureau



# 

#### (43) International Publication Date 17 July 2003 (17.07.2003)

### PCT

## (10) International Publication Number WO 03/057800 A1

(51) International Patent Classification7: C10C 5/00, B01J 8/10

C10B 7/02,

(21) International Application Number: PCT/GB03/00070

(22) International Filing Date: 10 January 2003 (10.01.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0200476.0

10 January 2002 (10.01.2002)

(71) Applicant (for all designated States except US): ASTON UNIVERSITY [GB/GB]; Aston Triangle, Birmingham B4 7ET (GB).

TER, Anthony, Victor [GB/GB]; 29 Starbold Crescent,

(72) Inventors; and

Knowle, Solihull B93 9LA (GB). PEACOCKE, George Vernon, Cordner [GB/GB]; 3 Glen Road, Cultra, Hollywood, Belfast BT18 0HB (GB). ROBINSON, Nicholas, Matthew [GB/GB]; 44 Maisemore Close, Churchill North, Redditch, Worcester B98 9LN (GB).

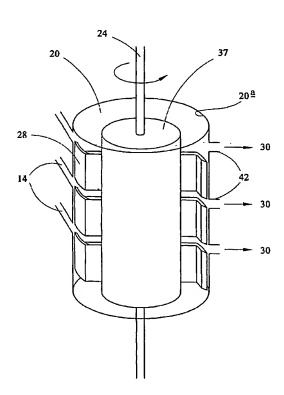
(74) Agent: WARD, David, I.; Marks & Clerk, Alpha Tower, Suffolk Street Queensway, Birmingham B1 1TT (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU. CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, IIR, IIU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(75) Inventors/Applicants (for US only): BRIDGWA (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: ABLATIVE THERMOLYSIS REACTOR



(57) Abstract: The present invention relates to an ablative thermolysis reactor (12) comprising a reaction vessel (20), and inlet (14) into the reaction vessel (20) for receiving feedstock, and an outlet from the reaction vessel (20) for discharging thermolysis product. Within the reaction vessel (20), is provided an ablative surface (20a) defining the periphery of a cylinder, and heating means (22) are arranged to heat the ablative surface (20a) to an elevated temperature. In addition at least one rotatable surface (28) is provided, the or each rotatable surface (28) having an axis of rotation coincident with the longitudinal axis of said cylinder. The rotatable surface (28) is provided relative to the ablative surface (20a) such that feedstock is pressed between a part of the rotatable surface (28) and said ablative surface (20a) and moved along the ablative surface (20a) by the rotatable surface (28), whereby to thermolyse said feedstock.

WO 03/057800 A1